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Manning's Monographs

No. 1 March, 1905

Berry-Bearing Plants

The Ramanas Rose
(Rosa Rugosa)

THE READING NURSERIES
J. Woodward Manning, Proprietor
READING, MASSACHUSETTS

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PLANTING ADVICE

FOR fifty years The Reading Nurseries have contributed trees, shrubs, and fruits for the finer enjoyment of the home grounds of New England. For fifteen years previous to 1898 the present owner was intimately connected with the propagation, dissemination and practical use of every available type of tree, shrub or herb in producing landscape effects. For the last ten years he has had to do with the actual development of a large number of the most important public and private grounds in America, has carried out such work in more than thirty states of the Union, and is thoroughly familiar with the principles of landscape design and its execution. He believes, however, that at present too much stress is given to landscape architecture so far as the necessity of the excessive cost of survey and plans may be required on the smaller estates; that while large or complicated undertakings certainly do warrant such expense, on the other hand good advice, founded on a thorough knowledge of plants, their requirements and adaptabilities, may be sufficient.

We are ready to give you the benefit of such knowledge, make a visit to your grounds at your suggestion, to carefully consider your needs, and give advice free of charge. The result may convince you that we can best serve you in giving further advice, or in the purchase and supplying of nursery stock; and believe this is a practical service that you should take advantage of.

Respectfully yours,

J. WOODWARD MANNING.

THE WHITE FRINGE TREE

Manning's Monographs

MARCH, 1905

Berry=Bearing Plants

OF late the plant-loving public has shown an interest in the use of berry-bearing shrubs for ornamental purposes; few, however, realize the number of kinds that are adapted to this end. I am, therefore, collecting together in this, the first of what I hope to be a number of useful horticultural monographs, a list of these plants with notes on the peculiar ornamental uses to which they may be put.

The high ornamental effect of berry-bearing plants was first recognized by the designers of the Boston park system; and thousands of foreign and, more particularly, native plants were used with this purpose as prominent a feature in the selection of kinds as that of the flowering value, though fortunately nearly every showy berried plant is effective in flower and foliage as well. The result of this effort to create extended interest in plants beyond their flowering period, which is too frequently thought of as the limit of vital interest in a plant, has been to attract thousands of people to these parks in autumn, fall and winter who would otherwise keep away until the next flowering period, and this peculiar feature of the Boston parks has been one of the means of extending their renown all over the country.

Yet this value of ornamental berried plants in public parks is but a hint of the great satisfaction that the private owner may have in their use for his own pleasure, opening up opportunities as it does for interesting winter effects that may be enjoyed at home. There will be found enough of variety in the list of kinds enumerated herein to enable one to produce interesting fruit effects throughout the fall and winter, and by a careful selection they may be made an interesting feature of the home grounds for every month of the year.

The major portion of showy berry-bearing plants are included among the shrubs, but some trees are notable, and among herbs a few at least cannot be overlooked. We will first consider the trees: The Mountain Ash immediately comes to mind as, perhaps, the showiest. For years we have been importing and planting the European Mountain Ash or Rowan Tree (Sorbus aucuparia) more largely for its fruiting effect than for other qualities, for the tree is not long lived enough to adapt it to street shade tree purposes, and it needs the sheltering protection of other trees to prevent its structural weakness from inviting disaster. It is a most beautiful tree, especially in autumn, with its abundant, showy heads of rich orange-red fruit, borne at the end of the branches in good

contrast to the gray-green compound foliage. Used properly in belt plantations or among groups of lawn trees this will thrive in a very different way than is common.

But an even more effective species has been almost entirely overlooked. I am here referring to the American Mountain Ash or Dogberry (S. Americana). Those who know our mountain forests must have seen this tree which so brilliantly adds to the autumn landscape—its large, showy bunches of deepest orange-red berries contrasting most effectively with the dark, glossy-green, compound foliage, which turns after frost to the most vivid crimson, while the bark of the tree in winter is of a conspicuous bronzy color. A low branched, shrubby tree, thoroughly happy under most soil conditions, even thriving in partial shade, and finely adapted for clothing down the foliage effect of tall screen plantations.

A more symmetrical ovate, tree-like form is the Central Asian S. Tianschaianica, which thrives in drier situations than our native American form, and whose symmetry and low-branched habit suit it for a lawn tree used as an individual or in belt planting, where it should be given emphasis by so planting as to enable it to stand out from the general background. The flowers are white, borne in large, flat clusters in June, the fruit is orange-red in showy, upright, flat clusters from five to seven inches across, and at all seasons the bark is of a rich brown hue.

Two other Mountain Ash trees are good. The oak-leaved Mountain Ash (S. hybrida) forms an upright branched oval-topped tree, 30-40 feet high, with oval, deeply cut foliage of a peculiar grayish hue, with a very distinct silvery under surface, so that with the breeze a pleasing glint of silver accompanies the foliage movement. The fruits of this tree are orange-red and borne in abundant showy heads in fall. The other is the White Beam Tree (S. Aira), little seen in this country, but worthy of extended use, a comparatively low-topped, irregularly round-headed tree, bearing oval foliage, with a dark green upper surface, but let a breeze stir the branches, and the tree fairly glistens with the exposure of the bright silvery under surface. The deep orange-red fruits are borne in dense heads along the branches, coloring up well in September and clinging to the tree till Christmas. These are typical of all the other species of Mountain Ash, all holding their clusters of berries long into winter, even beyond December, and all bearing clusters of white flowers in early summer.

The Hawthorns are also showy berry-bearing trees. I will only note the most distinct, for Jackson Dawson says he already has sown some seven hundred sorts, and four hundred are already named by Prof. Chas. S. Sargent and others as different. A whole garden could almost be made of this genus alone, they vary so in habit and size. Our native Cockspur Thorn (Crataegus crus-galli) with its dark, glossy green, ovate toothed foliage is one of the best, then the Scarlet-fruited

Thorn (C. coccinia) and the Red-fruited Thorn (C. mollis) both with duller green and more coarsely toothed foliage than the first, are well-known, conspicuous objects of the roadsides or abandoned fields of New England, bearing myriads of brilliant red haws until killing frosts bring foliage and fruits down closely together. Arnold's Thorn (C. Arnoldiana) is probably the largest fruited form of any, and forms a small tree, the great clusters of brick-red haws, each an inch or more in diameter, and borne in profusion throughout the branches, giving a gorgeous effect until December. Douglas's Thorn (C. Douglassi) is distinctly columnar in its habit of growth, and bears as showy fruits as the others.

The Washington Thorn (C. cordata), however, stands prominently forward as the most conspicuously brilliant winter fruited thorn, not because the berries are the largest, but because they are so abundantly borne in bunches at the end of the branches and are of the most showy, coral red color, clinging tenaciously to the branches until February, and lending a genuine glow to the landscape. In the young stage the tree is of rapid, upright growth, to a height of twenty feet, then it forms a round headed, lithe gray-branched tree, splendidly adapted for general planting, and particularly effective when used at the edge of woods. We would do well to adopt its use in hedge planting, as is commonly practised in the South.

The Spindle Tree

Until the last few years, the nursery man has entirely overlooked all these showy fruited thorns, and only offered the English Hawthorne (C. oxycantha or monogyna), which with its dark purplish-red berries, is possessed of considerable ornament, it is true, but is far less effective in fruit than in flower. It is a fact that all our native thorns can easily be transplanted from the fields in all sizes, and that under conditions of cultivation their beauty is remarkably enhanced. Besides their showy fruit they all bloom abundantly in early summer with perfect clouds of fragrant white flowers, sometimes tinged with pink.

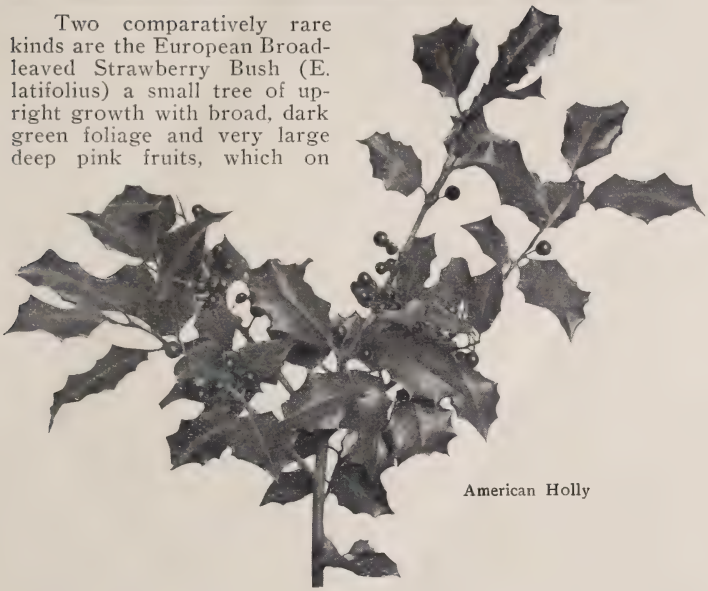
Some of the Magnolias have cone-like fruits that are conspicuous in September and October. The Japanese Magnolia hypoleuca bears very showy fleshy cones often nearly eight inches in length, of deep crimson. The so-called Cucumber Tree (M. acuminata), with those inconspicuous green flowers in June, bears later crimson fruits that look like miniature, warty, pink cucumbers, turning to deep red with frost, and from which glistening scarlet berries hang by yellow threads. Both the Umbrella Tree (M. tripetala) and the Great-leaved Magnolia (M. macrophylla) have long, fleshy cones of a rich pink color, with coral red berries. Fraser's Magnolia (M. Frazerii) and the Sweet Bay (M. glauca) bear comparatively small, pink, irregularly shaped fruits, these too with deep red berries. All of these Magnolias are recognized as ornamental in foliage and flower, and an appreciation of their fruit effects should add to their interest. M. Kobus has been lately reported as bearing showy crimson fruits. Do not lose sight of the fact that both M. acuminata and M. Frazerii are happy as lawn trees, but that M. tripetala and M. macrophylla naturally grow at the edge of heavy woods and should, therefore, be planted where they can gain the advantage of shelter, either from buildings or from larger trees, also that M. glauca naturally is an undergrowth shrub in woods, and should be given similar conditions to insure best growing results.

Spindle Trees, otherwise known as Burning Bush or Strawberry Trees, are very exceptional in their brilliant fall and winter fruiting effect, particularly interesting at this season, too, in view of the fact that their inconspicuous flowers draw little attention to the plants during spring and summer. In July the branches appear studded with hanging, triangular or "four-cornered" fruits, which in September take on showy coloring, later splitting open, and exposing most brilliant hued berries; then the autumn foliage of all the Spindle trees is very brilliant in coloring.

The European Spindle Tree (Euonymus Europaeus) bears orange fruits or capsules, with deeper orange berries, and in wonderful profusion. There is a variety (E. E. fructo alba) with white capsules that show even greater contrast with the deep orange berries than the type. When used as a tall hedge plant, these trees are apt to lose, by shearing, all the fruiting branches, which are those of the young growth; it is far better to use it in masses in the border or in groups on the lawn or as an individual specimen among lower growing shrubs.

A Chinese species (E. Bungeanus) of recent introduction is a particularly graceful, small, low branched tree with distinct greenish bark on the younger branches, which are literally loaded in late autumn with long-stemmed, pendulous, orange fruits and showy pink berries persisting in showy effect until February.

Two comparatively rare kinds are the European Broad-leaved Strawberry Bush (E. latifolius) a small tree of upright growth with broad, dark green foliage and very large deep pink fruits, which on



American Holly

opening, show deep red, clinging berries, and that very rare species from the Himalaya mountains (E. Hamiltonianus) a large shrub or small tree with smaller foliage and peculiar four-lobed, pink capsules hardly covering the grayish-brown seed. Give this shelter for best results. After all, none are more brilliant in autumn coloring of foliage or showy character of fruits than our own Wahoo or Burning Bush of the Central States (E. atropurpureus) which forms a small, broad headed tree with broad, thin, oval, light green foliage, deepest purple, long stemmed, small flowers in clusters in July, followed by masses of showy hanging fruits, which, while hid by the brilliant pink and red autumn foliage of the tree immediately with the falling of the foliage, become most conspicuous with their large, deep pink capsules and rich orange berries, these fruits remaining on the branches till long after Christmas.

Japan has recently contributed the Winged Spindle Tree (E. alatus) which is distinct from all others, forming a broad, low branched, rounded bush to a height of fifteen feet, with narrow, dark green foliage, and curiously winged, dark brown, corky-barked branches. The foliage of this takes on wonderfully brilliant autumnal coloring, and as soon as it drops, the tiny, deep crimson fruits hang like "ladies' ear-drops" all along the branches, and open to expose the small, brightest orange-red berries. No plant has a greater future for popularity than this. For novelty, the Warty-branched Spindle Tree (E. verrucosus) forms a rather dense, upright shrub, with

curiously black spotted branchlets, and having black berries partially covered by the orange-red cups. The Chinese Strawberry Tree (E. Yeddoensis) is a large, vigorous, broad-spreading bush, with broad, light green foliage, pink fruits, and red berries; useful as a specimen lawn plant.

A really remarkable show of fruit could thus be produced by the use of the Spindle Trees alone, for you obtain also variety of size, with types of growth and varied foliage. The list should include, too, the E. obovatus, a small, broad-spreading, green-barked American shrub, seldom exceeding a foot in height, bearing small, light-green, oval foliage, and in fall studded with three-cornered orange fruits and darker orange berries. This is used to cover the ground under trees in place of turf, or for edging taller growing shrub plantations. The evergreen-leaved Creeping Spindle Tree (E. radicans) will be spoken of again under evergreen shrubs. Siebold's Spindle Tree (E. Sieboldi) forms a semi-evergreen, large, rounded bush, with glossy dark green foliage, the most conspicuous flowers of any species in their profusion, and the same showy fruits common to the family.

In Apples and Crabs there are three but little known ornamental fruited types. Pyrus floribunda, of which the Parkman's Flowering Crab is a well-known showy flowered variety, bears in autumn myriads of pendulous apples, each about 1-4 inch in diameter, and brilliantly colored in orange and red, sour enough during this stage, but when thoroughly frozen very palatable; they cling to the branches long into winter, taking on dark shades of brown at this period. The second type is the Toringo Crab, (P. Toringo) from Japan, a close relative of the last, most beautiful in its prolific wealth of flowers in spring, and followed by pea-like, long-stalked fruits completely studding the branches throughout their length; yellow and crimson like the last, too. In Japan these frozen fruits are most assiduously collected for preserving. The third type is the Chinese Crab (P. spectablis) with its many various colored varieties of flowers both in single and double forms. Most of these have persistent fruits 1-2 inch or more in diameter and scattering through the branches, hang on in brown clusters until February. It is not the color of the fruit that attracts, but it is the graceful hang of the clusters along the branches, giving suggestions of the fall's fruitage, and promise of the future. These three types, then, are attractive until February, but do you fully value the ornamental feature of our ordinary crab apples, and for that matter the common orchard apples? No fruiting tree has more grace than the Siberian Crab (P. baccata) forming, as it does, an irregularly round-topped tree with pendulous branchlets, and densely clothed with its unusual wealth of broad, thin, light green foliage. The flowers are richly fragrant, and borne in profusion, and of the purest white. In July the green fruit commences to become prominent, and from then until September changes through

shades of yellow and crimson, loading down the trees with its weight. The named Crabs, generally cultivated for fruit alone, should too be planted for their fruit effect. Fine effects then can be made with these Crabs or apples, the range in size and habit of growth adapting them to various uses. The dwarf sorts for belt and screen planting, their occasional use as lawn specimens, and their massing with other small trees in groups are suggestions only of the many possibilities. I remember well a variety that I once used in connection with a boundary plantation; the name then was Pyrus Sieboldii, but since the first lot of plants I have lost track of any further supply. The shrubby tree only grew about six feet high, with golden brown winter twigs, the pure white flowers were borne in advance of the foliage and studded the entire length of the branches; the foliage was of a smooth, soft light green, and in midsummer the perfectly round, abundant fruits hung down on long stalks; with the autumn turning of the foliage, the apples commenced to color slightly, but the first hard frost wrought a revelation in a night, the next morning veritable balls of fire in their brilliancy of coloring hung in their place, and they remained in this beauty until Christmas, when their good eating (after freezing) quality, proved too tempting for the appetite of the owner; here, then, was beauty beyond the ordinary flowering period, and an example only of the possibilities with other of the flowering crabs.

Pyrus baccata

Cherries too have no mean value in the beauty of their fruits. The Sweet or Mazzard cherries are interesting enough from both the ornamental and practical standpoint, but this interest is too frequently lost because the trees are relegated to the orchard, where beauty becomes a secondary feature. The German and Bavarian idea of planting cherry trees along the streets is a good one, but can hardly be recommended here in the present stage of fruit outlawry, so seldom punished. The Morello Cherries are well adapted to greater landscape uses, because they are smaller growing almost shrub-like trees, and their fruit in more vivid hues stands out very conspicuously against the dark green, dense foliage. I have used these on estates where there was "no room" for a fruit garden, forming a part of the screen planting with Morello cherries faced down with the Dwarf Sand Cherry (Prunus pumilla) and varying the foliage effect with currant bushes relieved again occasionally with the more graceful Gooseberry bushes; and really the ornamental effect of flower, fruit and foliage was as fine as could be wished, and the owner was happy in the possession of the impossible fruit garden on the lawn. The suggestion

of Rum Cherries (P. Virginiana) may at first glance appear peculiar. They do have more bugs and worms than almost anything else, but spraying will stop that quickly, and once you learn to appreciate their fresh, glossy green foliage and the beauty of their early June flowers, which are borne in showy spikes of white, the long, hanging clusters of scarlet and black berries will gain in interest to you. If Rum Cherries are occupying some of the unused or waste corners of the grounds, perhaps clothing ledges that would hardly support any other vegetation, take care of them, and enjoy their fruit and flower effect.

The Pin Cherry (P. Pennsylvanica) is a taller growing, small tree of thinner habit, with small foliage and bright scarlet, pea-like fruit in hanging clusters. The European Bird Cherry (P. Padus) is less weedy than either of the latter, a truly ornamental lawn tree of symmetrical form, with rich green foliage, extremely prolific in flower, and bearing the showiest clusters of fruit of them all, bright scarlet in the type and with an equally ornamental golden-berried variety, the fruits as transparent as opals.

In speaking of dwarf cherries, the Sand Cherry (P. pumilla) introduced a few years ago as the Dwarf Rocky Mountain Cherry, is really ornamental in both fruit and flower. The oval foliage is of a rich, deep green; the habit is that of a low, broad bush, with gracefully arched branches, from which the dark purple fruits hang pendent in July and August. One or two other dwarf fruiting forms are good too—the Eastern Sand Cherry (P. Besseyi) and the Utah Hybrid Cherry (P. Utahensis), these bearing deep blue, black or plum-colored fruits. They are good eating, also. There is a dwarf cherry from Europe, known as Prunus Chamæcerasus, that is frequently seen on lawns, grafted on standard trunks and forming a rounded head of black-twigged growth, with small, oval, dark green foliage, flowering freely in spring, to be followed by small, dark red, very acrid fruits. Another imported ornamental form, the All Saints' or Everblooming Cherry (P. semperflorens) is similar to the last, except with brighter red berries, and a habit of blooming at intervals all summer. Some other Cherries could be mentioned, but these comprise the cream of the ornamental fruited forms.

Plums are closely related to Cherries, and merit mention, but the commercial fruiting forms can hardly be included under this monograph without overburdening the subject, and really the most desirable plants for ornamental use are those that show, as far as possible, the original grace of the growth of plants rather than utilitarian value.

The Beech Plum (Prunus maritima) has not been spoiled by improvement, and is largely used for planting on seashore estates; its merits lie in its prolific and early white bloom, followed by the showy, dark purple fruits of late summer. Other valuable though neglected species are the Alleghany

Plum (P. Alleghensis) from the mountains of Pennsylvania, with dark purple fruit; the Chickasaw Plum or Mountain Cherry (P. angustifolia) a small, bushy-topped, twiggy tree with red or yellow edible fruits in showy profusion, and the Wild Goose Plum (P. hortensis) of taller growth than the last, with equally showy fruits varying from clear transparent yellow to brilliant crimson. These are all ornamental, and wherever they occur naturally should be encouraged in growth. They are the progenitors, too, of a hardy race of valuable new fruits.

Leaving the more showy fruited trees, we must not entirely overlook those of less value. All the Aralias follow their broad heads of white flowers with masses of dark purple or black reddish-stemmed berries, lasting in effect to hard frost.

The Hackberry (Celtis occidentalis) retains its small, dark-brown berries throughout the winter. The Junipers (Juniperus Virginiana) are attractive to the birds in late winter, because of the steel-blue berries partially hidden by the foliage. The Mulberries (Morus alba and M. nigra) are interesting in the varied color of their fruit during their period of ripening. The Swamp-loving Tupelo (Nyssa multiflora) bears scattered twin scarlet berries, which later turn purple; the Stag-horn Sumac (Rhus typhina) is conspicuous with its showy terminal clusters of dark crimson fruits retained all winter; the Sassafras (Sassafras officinale) has small clusters of blue berries in September, and the Chinese Cork Tree (Phellodendron amurensis) bears great clusters of black fruits similar to the Aralias, hanging to the branches until Christmas.

I am not overlooking the American Holly (Ilex opaca) which figures so largely in our Christmas decoration, but will give it greater attention later.

The Barberries are perhaps the most generally known berry-bearing shrubs, and two kinds at once take precedence over all others for general usage and value, i. e., the Common Barberry (Berberis vulgaris) and Thunberg's Japanese Barberry (B. Thunbergii). The first, here in New England, thrives in the abandoned ledgy fields, and is popular, not only for its culinary commodity of "shoepeg sauce," but as well for its thorny character to aid in making an impenetrable hedge; but the natural pendulous sweep of the branches is emphasized when studded with their fragrant yellow flowers in spring, and later again by the weight of bright scarlet berries in drooping clusters that hang on the branches to February. The hedge use of the plants would be greatly improved if trimming was confined to taking out interfering branches, or reducing very unequal growths, but otherwise allowing the bush to show its naturally graceful habit. Its other uses are for general planting purposes.

The other well-known Japanese form (Thunberg's Barberry), is deservedly the most popular low-growing hedge

plant of today. Enormous quantities of plants have been sold, and yet the supply does not meet the demand. The first introduced specimen of this plant stands today on the grounds of the Bussey Institute of Harvard College at Jamaica Plain, Mass., now at least twelve feet through and four feet high, the progenitor of probably the first fifty thousand plants used in America until its value was established and importation of the seeds was made direct from Japan. Forming as this does a symmetrical hemispherical bush with dark, glossy green, oval foliage which assumes in fall the most fascinating shades of yellow, orange, crimson and scarlet, these attributes alone would make the plant popular, but add to this the fragrant yellow flowers in spring that bow the branches from their abundance, followed in late summer by berries of the most brilliant crimson which cling to the branches for months after the falling off of the foliage, and you can well understand the popularity of the plant. Hedge purposes are only one of the uses of the plant; it is good in belt planting to bring foliage effect down to the lawn or as a lawn plant in individual specimens. Generally the graceful effect of the plant is quite spoiled by too close planting. Four feet apart should be the least final distance; plant double thick if you must at first, but thin out long before they crowd.

There are many other species of Barberries, but of them the following are the best fruiting forms, inasmuch as they hold their berries the longest and are most prolific in their production: The Amoor River Barberry (B. amurense or hakodate) is a strong, vigorous growing species with very strong spines forming a larger shrub than our common Barberry, with comparatively broad, fresh green foliage; rather large, drooping clusters of fragrant yellow flowers, followed by deep scarlet fruits. The autumn coloring of the foliage of this species is very striking. As a quick-growing plant for border or screen plantations it can be well recommended.

An equally interesting species B. Sinensis is closely related to this in general effect, but B. heteropoda is notable in bearing deep purple berries, in as free and showy abundance as the others.

There is a true native Barberry, the B. Canadensis, for you know our Common Barberry is not ours at all, except as we borrowed it from England, bringing it over in Puritan times. This Canadian Barberry is very similar to our common one, except smaller in size in all its parts, and the berries are almost vermilion.

Wherever Common Barberries are already naturalized in ledges or rocky banks, encourage their growth; even in the woods they make a satisfactory undergrowth, and instances will undoubtedly increase like one that I am familiar with, where the location of a mansion was changed to preserve from injury a barberry, bayberry and juniper covered ledge, which undoubtedly was more beautiful than any artificial landscape

Common Barberry

effect that could have been produced. When you get over-enthusiastic on the Barberry question, there are purple, white and violet-fruited forms of the Common Barberry, which are interesting for their novel variety.

The Ash-leaved Barberry (B. or Mahonia aquifolia) a familiar form of the evergreen-leaved barberries, is a most useful plant, too, though usually wretchedly treated. Naturally existing as an undergrowth in cool, moist woods or along shady brook banks, it is generally planted in sun-baked, wind-swept situations, frequently in poor soils, and no wonder that under those circumstances it should sometimes winterkill or that the foliage should brown. Practise even a half-way treatment between the two extremes noted above, and you will have a hardy, vigorous evergreen, with beautifully formed foliage of the richest glossy green in midsummer and autumn, taking on rich copper hues in late winter, this color effect being repeated in spring in the unfolding young growth. At this time, too, the bright yellow, fragrant flowers are borne in showy clusters three to four inches in diameter, to be followed a few weeks later by even larger masses of glaucous blue berries hidden in the foliage. This is from British Columbia, and there are several other similar species from the West. A Japanese species (B. Japonica or Sieboldi) has enormous shiny foliage, and in a properly sheltered location is evergreen in character.

Of the Roses, two are the most notable. First, the Russian or Ramanas Rose (Rosa rugosa) bearing showy clusters of deep, orange-crimson hips or fruits shown to great advantage against the rich, pliated, glossy green foliage, a most popular plant because of the showy foliage and continuous flower or fruit effect from June to January. The white flowering form has distinctly lighter colored fruit. Second, the Shining-leaved Rose (R. lucida) whose compact, showy heads of crimson fruits on distinctly red stems commence to be conspicuous in September, and retain their brilliancy long after February, giving a glow of color in a mass planting that is fully as important as the foliage and flower effect during the

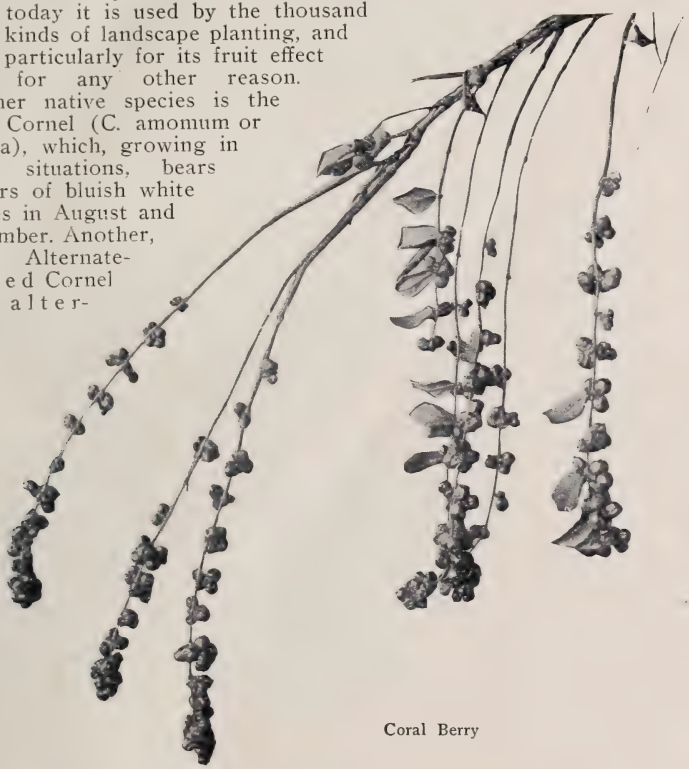
summer. Other species have showy fruits, one the Eglantine Rose or Sweet-briar (R. rubiginosa) whose abundant hips take on bright yellow and deep orange in late summer and autumn; another, the Alpine Rose (R. alpina) a very upright growing bush, with deep red barked branches, soft green foliage and deep pink flowers borne very early in summer, followed by solitary, pendent, oblong, deep scarlet berries clinging until December. By no means can we pass by the Japanese Rosa multiflora, whose showy broad spikes of fragrant white flowers are followed by open clusters of small berries that after the first frosts take on rich bronze and red colors lasting till spring.

This may be by no means a fair enumeration of the berry-bearing beauties of this family, yet these five stand out primarily, and the others can all in the typical forms of the species be depended upon for ornamental berried effects.

The Bush Honeysuckles are noteworthy in their berried effect. The old-fashioned Tartarian Bush Honeysuckle (Lonicera Tatarica) is a familiar kind, with white, pink or variegated flowers followed by clusters of transparent coral-red or orange berries; but the stiff, upright habit of this shrub fails to show these berries with the same degree of grace as with other species, the three most notable of which are the L. Morrowii or Morrow's Bush Honeysuckle in its red or yellow fruited forms, L. Ruprechtiana, which bears myriads of yellow or crimson berries, and L. chrysantha, with transparent, clear, orange-yellow fruit. All are showy when in flower, and all form graceful, broad-spreading shrubs of rounded outline. From July to November they are virtually loaded down with their fruitage, forming more brilliant color effects from this source than from their flowers. L. bella albida and L. bella candida are two intermediate forms between the Tartarian Honeysuckles and the group noted above, and they also are brilliant in their midsummer fruitage. Nearly all the other species have showy fruits, but in less abundance than the above. The American Fly Honeysuckle (L. ciliata), bears light red berries in pairs; L. gracilipes or Phylomelae, pendulous, bright scarlet fruits; L. Standishi, scarlet fruits. Both L. involucrata and L. Ledebouri have black berries nestled in rather conspicuous purplish bracts. L. coerulea has blue berries, and L. alpigena, of sturdy growth, bears rather inconspicuous flowers, but the berries are shining scarlet, and very effective in their season.

The Cornels or Dogwoods are already largely used in landscape effects, and are seen frequently in our park drives and on private grounds; the greater portion are strictly American plants too, and every section of the North has its representatives. In the country about Boston along the roadsides the Panicled Cornel (Cornus candidissima or paniculata) grows abundantly, forming an upright, gray branched shrub with grayish, dull green foliage, white flowers borne profusely in dense clusters in early summer and followed by ivory white

berries on pink or red stems, lasting until October or later. A few years ago this plant was hardly known to the nurseryman; today it is used by the thousand in all kinds of landscape planting, and more particularly for its fruit effect than for any other reason. Another native species is the Silky Cornel (C. amomum or sericea), which, growing in damp situations, bears clusters of bluish white berries in August and September. Another, the Alternate-leaved Cornel (C. alter-



Coral Berry

nifolia), forms a small tree of peculiar aspect in the horizontal arrangement of its branches. It is frequently seen along the edge of woods and thickets, bearing showy clusters of deep blue berries with distinct reddish stems. Plant under similar conditions of light, shade and moisture, and its branching habit and shiny berries will give interesting variety. The Red Ozier Cornel (C. stolonifera), is a broad spreading bush with soft, green foliage; during winter the bark is of a vivid rosy crimson, exceedingly useful for its contrast effect with other colored barked plants. There is a golden barked variety now offered as well. In July the small white flowers are borne in dense heads, followed later by equally showy white, slightly tinged blue berries. A recently discovered American species

(C. Baileyii), is of vigorous growth, with dark, purplish red winter bark, large foliage, white flowers, and pure white berries.

Two other American species are notable and widely divergent in character: one, the Flowering Dogwood (C. floridus) is fully appreciated in its ornamental value, forming an upright growing small tree, with purplish young branches, becoming gray with age and rich, glossy green, oval foliage which takes on glorious autumn coloring. The so-called flowers are very large, pure white, each often three inches across, and borne in greatest profusion in late spring, just in advance of the opening foliage, the pink flowered variety is equally effective, and there is a weeping variety of high ornamental merit. Not the least value of the plant lies in its clusters of brilliant scarlet glossy berries, coloring attractively in September, and showing to advantage against the foliage. The other is the Bunch Berry (C. canadensis), of our northern woods, (with a cousin of the "North Woods" C. Suecica), a true shrub, but of miniature growth, sending underground stems beneath the forest mosses or fallen leaves and throwing up stalks four to six inches high with a large white single "flower" nestled in the centre of the upper tier of leaves, followed in a few weeks by a bunch of bright scarlet edible berries. Broad carpets of this plant are to be found throughout our cool, moist, northern woods. They are beautiful in effect at all seasons, and where the forest has been cut off the plants persist in the open, even forming broad carpet-like colonies in the open pastures. No plant has been more neglected than this. Today there are few sources indeed where satisfactory plants can be obtained; and on general principles it can be said that they should only be planted in their original, sod-like masses, and under such conditions care is needed at first to get such sods to thrive under artificial conditions. The round-leaved Cornel (C. circinata) is another native species, forming an upright shrub 8-10 feet high with brown and red branches, odd, rounded, pleated foliage, white flowers, and persistent, showy clusters of white or slightly blue tinged berries; this transplants with some difficulty, but well repays any effort needed for its success. Other American Dodgwoods are C. stricta, more open in habit than C. candidissima, with purple or greenish winter bark, but otherwise similar to its more northern cousin; C. Nuttalli, from British Columbia, still more showy in all its parts than C. floridus, but as yet unproved as to hardihood or adaptability to the East, and C. glabrata and C. pubescens, two other West American species not unlike in general aspect our more common white berried forms.

Europe supplies us with the brilliant coral red barked Siberian Red Ozier (C. alba), differing in the coloring of the stems in various types, but all with white flowers in dense, showy, flat heads, and followed by pearly white berries in

September and October; then C. sanguinea has purplish red bark, greenish white flowers, and dark blue-black berries. The Cornelian Cherry (C. Mas), is a very notable species, forming a small, upright growing, brownish yellow branched tree, very effective in early spring with its profusion of bright yellow flowers in small, button-like, terminal clusters borne in advance of the glossy, dark green foliage. In August and September the "cherries" hang throughout the branches in

The Maple-leaved Arrow-wood

showy, shining, edible, scarlet fruits—altogether a most ornamental subject.

A Japanese form (C. officinalis), is closely allied to and very similar to the last. I have omitted the Japanese C. Kousa or Benthamia Japonica and C. capitata or Benthamia fragifera, two very showy flowering forms rivalling even the Flowering Dogwood in effect; the first, however, must have a cool, shady situation to do best, and the second is hardly happy north of Philadelphia.

Perhaps the subject is becoming bewildering in the variety of berry-bearing shrubs, yet we have but just reached the most interesting class of all, the Arrow-woods or Viburnums,

which possess the greatest range of berry coloring of any family, and an unsurpassed ornamental value. Here, again, our own American species are second to none. First, the true Arrow-wood (Viburnum dentatum) growing along our roadsides to best perfection in rather moist situations, is an example of the merit in our recent appreciation of our own native plants. Twenty years ago we never thought of its use in ornamental planting, and no nurseryman could be induced to offer it to an unappreciative public. The late Frederick Law Olmsted saw its value, introduced it into his park plantations, and today the nurseryman is busy producing plants enough to meet the demand, which is easily understood when one considers that no shrub forms a more vigorous upright, dense-growing bush than this, with long, clean, gray stems bearing the richest, glossy-green, toothed and pleated foliage, contrasting most effectively with the myriads of dense, showy, slightly fragrant heads of minute white flowers, to be followed a few weeks later by clusters of the most brilliant blue berries, gracefully bending the branches under their load, and persisting on some plants to hard frost. The wonder is that the plant was valued so slightly in the past.

Closely allied to this, with broader, thicker foliage and rougher bark, is the Soft-leaved Arrow-wood (V. molle) equally effective in all other characteristics with the last, and forming a broader spreading bush. Quite distinct from this is another native in dense thickets on drier soils, the Witherod (V. cassinoides) sometimes called Appalachian Tea, a dense branched, upright growing shrub with brownish gray branches, smooth, toothed edged, shining green foliage which assumes most brilliant autumn tints, and showy heads of small white flowers followed by dense clusters of berries, first light pink, turning to deepest blue, many shades of these colors appearing in one bunch. A handsome bush in all stages of growth.

Next, the Stag-bush or Black Haw (V. prunifolium), naturally growing in dry pasture thickets, forming a small, densely branched tree or broad growing shrub with spiny, dark brown branches with reddish buds, thick, oval, dark, shining green leaves, a profusion of showy heads of fragrant, pure white flowers, followed by effective clusters of blue-black, heavily bloomed berries; then the northern Nanny-bush or Sheepberry (V. Lentago), similar to the last, except in having longer, thinner, lighter green foliage, and persistent drooping clusters of black fruits. More shrub-like in growth and even more showy in flower than any of these is that conundrum for the gardener, the Hobble-bush or American Wayfaring Tree. (V. alnifolium or lantanoides), which so persistently refuses to thrive under cultivation. But why not, when it naturally grows in the loose leaf mould of the cool forest with its moisture and shady retreats? Try to reproduce these conditions, and you will have less difficulty. The immense, broad, heart

The Common Arrow-Wood

shaped, velvety surfaced, soft green foliage alone makes this plant attractive, but the showy flat heads of purest white fragrant flowers borne in advance of the unfolding leaves are charming, while later the dense clusters of red and dark purple fruits keep up the interest in the plant until at last it appears in its final fascinating galaxy of autumnal coloring, often of the deepest claret red. Probably the best appreciated fruiting Viburnum is the Cranberry bush (V. opulis) native of both Europe and America in their northern latitudes, forming a very vigorous shrub with sturdy gray branches; deeply lobed, light green, showy foliage, dense flat effective heads of pure white flowers in early June, followed closely by large clusters of brilliant crimson berries showing most effectively in early August against the foliage and later with the gray branches, for these berries persist in their full showy color throughout the winter. If one winter berry bearing shrub alone were possible on your grounds by all means select this, for none gives greater satisfaction for so many months of the year. There is a distinct Japanese type of this (V. Sargentii or Pekinensis), which is even more floriferous than our own, but the fruits are not as large or showy or quite so persistent, though the plant is a most meritorious one. In Canada and along our high Alleghany mountains occurs another native of great merit but practically unobtainable from nursery sources at present. I refer to the Downy-leaved Arrow-wood (V. pubescens) a dense growing, globular formed shrub with soft velvety, gray-green, heart shaped, deeply toothed foliage, and the whole plant lit-

erally covered with the profusion of white flowers in dense heads borne in early June, to be followed in late July to December with deepest blue-black berries. This grows naturally in rocky woods, but succeeds admirably in rich soils in ordinary shrub plantations; it is a second cousin, I presume, to our neighbor the Maple-leaved Arrow-wood (V. acerifolium), which thrives so well in our rocky or gravelly oak grown glacial ridges in open or partial shade, the bush being very upright in growth, with light brown stems, soft maple-leaf shaped light green foliage, terminal heads of creamy white flowers followed by persistent, open clusters of shining black berries.

The above are the principal showy fruited native Viburnums, but China, Japan, and northern Europe contribute others including Siebold's Arrow-wood (V. Sieboldii-latifolium-Japonicum), a very ornamental large tree-like shrub with long, ovate, deeply ridged, light glossy green foliage, the most attractive in foliage effect of all the Viburnums and bearing very numerous, unusually showy creamy white, rather malodorous flowers, followed in midsummer by very broad, rounded clusters of the most brilliant, glossy crimson berries, soon turning black and quickly falling. For its brief interval of fruitage effect this is a most notable plant. Then follows V. tomentosum, a beautiful foliaged species which a few years ago was used as a stock for grafting the Japanese Double Snowball upon, until the accidental oversight of allowing the suckers from the stock to overtop the graft enabled Mr. Chase of Salem to learn of the even greater ornamental value of the type than double flowered form; its clusters of deep red fruits turning in early fall to black. V. dilatatum is another Asiatic kind, forming a comparatively low branched, globular bush with dark brown twigs, curiously clothed with black hairs, flat heads of white flowers and particularly ornamental and persistent open, upright clusters of small glowing crimson fruits, lasting long into the winter. Then a closely allied form from a similar source, Wright's Arrow-wood (V. Wrightii),varies only in being of more open habit with much larger nodding fruits. Finally, we have the European Wayfaring Tree (V. Lantana), a large, vigorous growing, globular headed broad spreading bush, with brownish, even coppered-colored and very woolly branches and rounded heart shaped leaves curiously covered with a brownish down on the under surface; with flowers borne in rounded heads, creamy white, and followed by globular clusters of deep red fruits changing to black, often remaining on the branches till late winter.

From this narrative of kinds you will probably agree with me that the ornamental fruiting value of the Virburnums alone would warrant their extended landscape use, and it only remains to say that while all are adapted to general ornamental

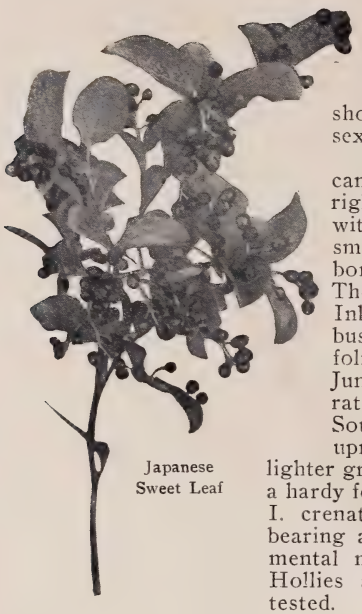
planting, such particular kinds as V. Sieboldii and V. prunifolium make choice specimen lawn trees, and the V. dilitatum, V. pubescens and V. Wrightii will, from their rarity and peculiar ornamental value, be cherished subjects for conspicuous planting as individuals.

The Cotoneasters have no American types, being confined to Europe, Asia and North Africa. They are interesting in that several kinds are from the Himalayan mountains of India, found at such high altitudes that they are fairly hardy in our severe climate. They vary from vigorous, rapid growing shrubs of open branched habit to dwarf, globular and again to prostrate forms, including those of both evergreen and deciduous characters. The list is long, and all are noteworthy for their fruiting effects and in a less measure for their abundant small white flowers often tinged with pink, while all have rather small, dark-green foliage. The best deciduous forms are Cotoneaster vulgaris and C. tomentosa or speciosa from Europe; C. acuminata or Nepalensis. C. Simonsi and C. horizontalis from the Himalayas and China, and the two latter retain their foliage well into the winter; all bear conspicuous red fruits from September to January. The C. nummulari, a low branched, broad spreading shrub, and its variety racemiflora are nearly evergreen, and effective in their abudance of deep red fruits. C. multiflora or reflexa with slender arching branches; C. microphylla and C. buxifola are evergreen Himalayan forms, where they make low creeping shrubs among the mountain ledges. For best results give a partial shady situation and slight protection. C. frigida is not hardy.

Our American Holly (Ilex opaca) fully replaces its tender English cousin in perfect hardihood, and creates fully as brilliant berried effects with less glossy green foliage. It can be successfully transplanted, but care should be taken to give it a shady situation in rich soil. In spite of its introduction to gardens since 1744, as yet the nurserymen fail to so propagate both sexes that the fruiting effect may be assured to the planter.

The Swamp Winter Berry (I. laevigata) and the Black Alder (I. verticillata) are two other American species, both dropping their foliage in winter, but extremely effective with their dark purple branches literally studded with clusters of coral red berries.

The Japanese Panax



Japanese Sweet Leaf

Both are showy in fruit effect as early as September, but the Black Alder retains the fruit longer, even into March. These are easily transplanted of any size, but care should be exercised to obtain both sexes.

A less well-known deciduous American Holly is the I. monticola, an upright, gray-barked, stiff-branched shrub with rather coarse and large leaves; small clusters of scarlet berries are borne in late fall and early winter. There are other evergreen hollies, the Inkberry (I. glabra), a low, globular, bushy plant with glossy, dark green foliage, and inconspicuous flowers in June, followed by scattered black fruits rather hidden by the foliage. In the South the Yaupon or I. cassine is more upright in habit, with smaller, thicker, lighter green foliage and showy scarlet berries; a hardy form for the North is yet to be offered. I. crenata is from Japan, a graceful shrub bearing a profusion of black berries of ornamental merit. A number of other Japanese Hollies are promised, but as yet not fully tested.

The Black Alder and Smooth Winterberry are adapted for general planting purposes; the Inkberry is for the outer edges of shrub belts or in connection with Rhododendron and Azalea plantations; the Large-leaved Holly (Ilex monticola) is better adapted for a large undergrowth shrub in open woods than elsewhere.

A most remarkable plant is the Japanese Sweet-leaf (Symplocus crataegioides). This forms a large, densely branched, irregularly globularly headed shrub. In early June it bears white spikes of fragrant, minute flowers in profusion, showing to advantage against the dull green, oval toothed foliage. In mid-August the gracefully hung clusters of small berries begin to take on hues of blue, deepening to the most intense ultramarine blue shade imaginable, and creating a most wonderful show. Surely no lawn can be classed as complete without one representative plant, and really one is enough, and this should be treated as a specimen plant. This plant has perfect flowers, so berries can be assured with every plant, an advantage the Hollies do not possess.

Japanese Sweet Leaf

Iliciodes mucronata, the Mountain Holly, formerly known as the Nemopanthus canadensis or fascicularis, is a close relative of the other Hollies, and when fully known will become a popular plant; it is a native of the northern swamps, thriving, however, on all soils, of very upright habit, gray barked on the old shoots, but conspicuously purple barked on the young twigs. The foliage is thin, oval, toothed, rather dull but dark green; the flowers are inconspicuous, but the fruits are veritable balls of crimson, pendant on long stems from the branches, giving the whole plant a glow of color in late summer, due to the profusion of the berries.

The Bayberry (Myrica cerifera) is another showy fruited shrub, the wax covered grayish white berries being studded along the dark brown branches and retained all winter. For seashore planting this is one of the best moderately low growing shrubs, its ornate, glossy green summer foliage making the plant with its berry attributes attractive at all seasons; salt spray does it no injury, and its varied uses in shrub planting are only limited to the supply.

Panax sessiliflorum is a very peculiar Japanese shrub of the Aralia family, with rather coarse unattractive foliage, forming a broad irregular shrub of rather stiff outline. In September,

however, the whole plant is given a graceful bend by the weight of its large globular heads of black berries, persisting until January. It has its uses for planting at the edge of ponds or in masses with a view to its being seen from a distance.

Photinia villosa, a deciduous Chinese and Japanese shrub, has received of late much merited appreciation, and is freely used for its fruit and flower effect. A vigorous growing large shrub with light green, oval, toothed foliage, a profusion of showy clusters of small white flowers in May, followed in late summer and early winter by loose clusters of brilliant scarlet berries.

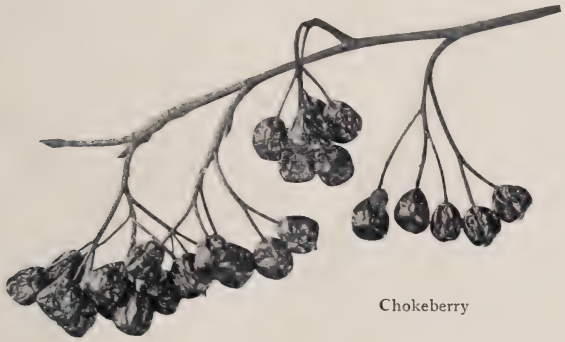
The Red and Black Chokeberries, too, are already being freely used for their combined flower and berry effect; thousands are used in the metropolitan park system of Boston and elsewhere, and they admirably enliven the fall and winter landscape. The Red Chokeberry (Sorbus arbutifolia) grows in a loose open manner, bearing attractive small clusters of white richly tinged pink June flowers; the foliage of a rich glossy green, taking on brilliant red and darkest purple autumnal shades. The fruit is dull showy red, remaining attractive on the plant long into the winter. The Black Chokeberry (Sorbus melanocarpa or Aronia nigra), forms a dense, upright, globular-headed bush, three to five feet high, bearing a marvellous profusion of showy small clusters of similar flowers to the last, and followed by myriads of shining black berries poised most attractively on the branches and persisting throughout the winter.

The Spice Bush or Fever Bush (Benzoin odoriferum), is another attractive native, forming a small, low-branched oval topped tree with light brown branches; in early spring the whole tree fairly glows with yellow from the myriad heads of flowers; then the foliage is attractive in hue and form, and sets off to the best possible advantage the attractive, glossy red fruits in small clusters in August and September. The shrub is much used for mass planting, but its value as a specimen plant for the lawn is less generally understood.

The French Mulberries of the South (Callicarpa Americana) will succeed in the North if planted with due attention to the selecting of a sheltered location; they are exceedingly attractive, too, forming medium-sized, graceful shrubs, with thin, light green foliage. The rich, violet flowers are densely clustered along the length of the stems and are quickly followed by rich violet colored, clustered fruits, bending the branches with their weight, and remaining on the plant until hard frost destroys their color beauty. There is a variety, too, with pure white fruit. Hardier than this, however, but still best suited for a well protected situation, are two Japanese species (C. Japonica and C. purpurea), the first with smaller foliage than the American form, with pink, almost white flowers, and followed by violet fruit, and the second even smaller, but very similar in all its details. In the shel-

tered recesses of buildings, in situations not subject to too much sun, with the resultant alternate freezing and thawing, or where protected by belts of evergreens, these can be used singly or in groups to excellent advantage.

The White Fringe (Chionanthus Virginicus), one of our oldest cultivated American shrubs, bears attractive, large, showy pendulous clusters of dark blue berries in August and September, partially hidden by the broad, deep green foliage and, dropping before autumn, though seldom noticed, if used in vases they are very attractive. The rarer Chinese kind (C. retusus), also bears its blue-black berries on long, pendent, thread-like stalks, but more evenly distributed over the bush, hence more conspicuous.



Chokeberry

Of the rare and showy Coriarias there are two fairly hardy species, the Japanese (Coriaria Japonica) and the Himalayan (C. terminalis). Both are low-spreading plants, the latter herbaceous in nature, but each with gracefully arched stems, Ailanthus-like in their foliage effect, and bearing showy, pendulous clusters of fruit at the base of each leaf. C. Japonica, with brilliant red berries in July, later turning black and falling in September ,and C. terminalis, with yellow berries, clinging to the branches in showy profusion. They are better planted in sheltered locations, and care should be exercised in their use, as the seeds are said to be poisonous, though the pulp of the berries of the Himalayan species are said to be used for brewing a native wine.

The Mezereon Shrub (Daphne Mezereon), usually catalogued as our earliest flowering hardy shrub, is even more ornamental in its fruit than flower effect, the red or purple flowering type bearing rich, orange-red berries, closely set along the stems in June and July, the white flowering variety bearing transparent yellow berries.

The Sea Buckthorn (Hippophae rhamnoides), was particularly brilliant in its berry effect last season. The shrub is very

distinct from any that we have considered as yet, forming an upright, though irregular growing shrub to a height of ten or twelve feet with spiny branches, dark brown and gray in winter, in summer densely clothed with narrow foliage of a distinct and effective silvery gray color. The berries are borne on the older wood, thickly studding and often completely surrounding the branches, producing a most striking effect, orange-yellow, dotted black in color, and clinging to the branches in their showy profusion until March, gradually bleaching out to a pale yellow in mid-winter. A very useful shrub for its silvery gray cast of foliage color, much used for its contrast effect with darker-hued foliaged shrubs, it is adapted to all good soils, preferring a moist situation, and care should be used to plant in groups that will include both sexes of the plant to insure fruiting. As a seashore plant, this is one of the best. Closely allied to this are two other types of plants, the Oleasters and the Buffalo-berries, and these, too, have markedly silvery hued foliage, rendering them equally valuable for contrast effect.

Of the Oleasters the finest without question is that perfectly hardy Japanese Oleaster or Goumi (Eleagnus longipes or edulis), which forms a broad, rounded shrub, with peculiarly dark hued branches and showy ovate, rough, silvery, undersurfaced foliage, fragrant yellowish but inconspicuous flowers borne at the base of each leaf in June, and followed by the most beautiful of any berries that we have, each over half an inch long, oval, of a rich scarlet hue, the whole surface most beautifully studied with golden or silvery dots glistening with their double color as seen in varied lights. These fruits hang from the branches on long stems, and bend the limbs most gracefully in their profusion. The berries are edible, too, very refreshing with their pleasant acid taste, and well adapted for preserving. Other Oleasters are E. angustifolia, the Narrow-leaved Oleaster, with soft, silvery green foliage and smaller but still showy yellow, silvery-dotted fruits; E. parviflora, with undulate-edged, oval foliage that is very silvery beneath, globular, distinctly silver-colored fruit becoming pink on ripening; this is a native of the Himalaya mountains. Two other forms, E. multiflora and E. umbellata, are so closely like the Goumi that they are practically the same. There are also some foreign evergreen leaved forms including E. pungens, but these are not well adapted to the vicinity of Boston. The Silverberry (E. argentea) of the North and Northwest, where the fruit is collected and preserved by the natives, forms a low-branched, spreading shrub with contrasting brown and silver barked branches, small oval foliage, silvery white throughout, and with this color repeated in the berries as well. All of these Oleasters will thrive in ordinary garden soils, but as well in dry situations, and are frequently used to advantage in creating a gray effect in the landscape, or in connection with greener hued shrubs to accentuate the contrast effect of each.

Snowberry

The Buffalo-berry (Shepherdia or Lepargyrea argentea) is another western and northern shrub, very silvery in its foliage effect, and bearing showy yellow or red edible fruits in profusion.

One remarkable instance of the appreciation of the public of the ornamental effect of a berry-bearing shrub is that of the Snowberry (Symphoricarpus racemosus), which has been cultivated for nearly one hundred years in gardens for this berry-bearing feature alone. No old fashioned garden was complete in its list of shrubs without this, and today it really stands unique in its way for the abundance of showy clusters of purest white berries that are borne so gracefully on the slender branches from August until long after the January frosts have destroyed their beauty of color. It is the best white fruited shrub, the Wolfberry (S. occidentalis), its cousin, not being as prolific in fruit, and not sufficiently distinct otherwise to make it a rival. Another cousin, the Coral-berry or Indian Current (S. vulgaris), is totally distinct, however, bearing smaller, deep coral red berries, later turning to purple along a third of the length of the branches from the tips, and clinging throughout the winter. This, too, is a most graceful plant. All these three are used in shrub planting, the Snowberry usually being faced down with the smaller growing lower branched Indian Currant, not only that no bare branches shall show in the group, but as well for the contrast effect of the berries. Both, too, will succeed better in shady locations than most other shrubs.

As intimated before under the head of Morello Cherries there is much beauty in our purely garden fruits. The Garden Currants (Ribes rubrum), are showy, and were it not for the tendency of losing their foliage in late summer, could often be used for their ornamental as well as their practical fruit value. While all the numerous species of Currants and Gooseberries bear fruits, the really ornamental kinds are confined to the European Mountain Currant (R. alpinum), which forms a brown branched, sturdy, upright growing, globular-headed shrub, with handsome foliage; the inconspicuous flowers are followed by attractive scarlet berries. Another, R. fasciculatum, from Japan and China, forms a low, broad bush with good foliage and very showy and persistent clusters of brightest crimson fruits. The Raspberries are showy in fruit and flower, and an example occurred in my work where these and other garden small fruits were so used as to form one of the attractions of the place from their ornamental fruit effect. The

common garden Raspberry, Currant, Blackberry and other fruits made a distinctly ornamental feature that was heightened by so avoiding unnecessary stakes, and bad tying as to enable the plants to assume their natural grace. The effect was highly satisfactory. The Flowering Raspberry (Rubus odoratus) is already freely used in shady, moist situations, where the plant thrives, and elsewhere, the broad, soft green, velvety foliage contrasts to advantage with the comparatively large, deep pink or crimson flowers, to be followed by the less showy red berries. The Japanese Wineberry (R. phaenocolassus is showy, and would have merited the extensive advertising it received a few years ago, provided the plant had been recommended for its ornamental value rather than as a commercial fruit. The arching stemmed habit, with the conspicuous profusion of reddish hairs covering all portions of the plant, together with its salmon-colored berries, gave it ornamental value, and I have used it to good advantage in this respect.

The Cloudberry (R. chamaemorus), of the extreme north, forming a broad carpet 6-8 inches high, is said to be a most attractive landscape feature in the peaty bogs, where its showy white flowers are followed by equally attractive globular heads of red or yellow fruits. In England this is used in cool situations on rockworks for this ornamental feature of flower and fruit. The Salmon-berry of the Northwest (R. spectabilis) is also a distinct landscape feature both at flowering and fruiting seasons, and has been cultivated for these features alone. In the East the berries shrivel in our blazing sunny summer days, so care should be exercised accordingly in the selection of their location. Other Raspberries and Blackberries are good, but those given are probably the best from their ornamental fruit standpoint.

I am purposely making but little mention of the Blueberries, Juneberries, and Huckleberries, because, though they are effective in their way, yet are either short lived or too highly prized for eating to be allowed to remain on the plants. Some of the Blueberries especially could be used to advantage on large estates where the wilder landscape effects are desired. However, our common Elderberry of the swamps and roadsides (Sambucus Canadensis), usually occurs in sufficient abundance to become an ornamental feature. This again is one of our native shrubs that of late is being properly appreciated for its flower and fruit effect, and is being largely used in park and general ornamental planting; it thrives in a variety of soils, makes rapid growth, and bears its very showy, broad, flattened clusters of fragrant, creamy white flowers in abundance in June, to be quickly followed by great heads of rich purple-black berries. Less well known, but even more attractive is the rarely seen Red-berried Elder (S. racemosa), a more sturdy brown-branched, prominent budded, stiffly upright shrub, with much darker green foliage, less showy flowers, but these borne in close, round heads in advance of the foliage and followed by

very striking bunches of bright red, edible berries in June and July, showing to great advantage against the dark green leaves. These two are the best of the Elders.

Black fruited shrubs are well represented in the Privets and Buckthorns, and they are more attractive than would at first appear, the dull blacks, glossy blacks, and blue blacks give distinct impressions, and the varied habit of clustering and hanging from the branches may be interesting, aside from the graceful poise of branch that the weight of fruit may cause. The Common Privet (Ligustrum vulgare), clusters its shining black fruits in rounded masses at the extreme ends of the stiff, upright branches. The so-called California Privet (L. ovalifolium), has even larger similarly disposed clusters of fruits. On the other hand, the new L. ciliatum from Manchuria is completely covered with small, blue-black berries hanging from the tip of every branch and branchlet, so that the whole plant takes on a graceful, pendulous habit throughout the winter, and the fruit effect is a truly ornamental feature, irrespective of the other good flowering and foliage qualities of the plant. L. meadia, L. Regalanum, L. Amurense, all bear their fruit much as the above, but in a less ornamental degree from the berry standpoint. As to the Buckthorns, their berries are generally clustered at the base of the smaller twigs, thus they are partially hidden by the foliage in late summer; most of them retain their fruits until January, and are attractive in the same manner as the black fruited Privets. The common European Buckthorn (Rhamnus catharticus), so much used at times for a hedge plant, has dull, black berries. A rare species from Amurland and North China R. Dahurica forms a small, low-branched tree, and bears abundant showy clusters of brilliant glossy black soft berries, remaining in perfection until February. Three other tall shrubs are R. Purshiana of the Northwest, with long, ovate, undulated edged, deep green leaves; R. Caroliniana, the Indian Cherry of the South, with smaller foliage, and R. Frangula, a handsome lawn shrub, with large, glossy green foliage. Each of these bears abundant showy red berries, turning with age to black, and falling shortly after the foliage. With these exceptions, the other forms of Buckthorn are black-fruited.

Japanese Oleaster

We have now considered the major portion of the ornamental fruited trees and shrubs. Some of little value I have entirely omitted; a few, too, have been purposely overlooked, because there would be a difference of opinion as to their ornamental value. Such as have been recommended are good.

Some vines and creeping shrubs should be added, of which in vines the Matrimony Vine (Lycium chinensis), must take precedence for ornamental summer fruiting effect. The rampant, dense-branched growth enables its use for either climbing or clambering purposes on trellis or over stumps and rocks, or hanging down over embankments and walls. The fruits are an inch or more long, oval, brilliant orange-scarlet, and borne in wonderful profusion on every branch or branchlet, remaining till winter. An older garden form, the Barberry Boxthorn (L. halamifolium or barbarum), is frequently seen in old dooryards trained over light trellises, but the fruit is not as showy as its Japanese cousin. With both forms the berries are said to be poisonous, but accidents are practically never heard of, and the bitter taste of the fruits is a fair safeguard against their being eaten in dangerous quantities.

The Creeping Spindle Tree (Euonymus radicans), if selected for the fruiting form, bears abundant, richly orange-colored berries, borne in showy, yellow cups, contrasting finely against the glossy evergreen foliage. This frequently replaces the English Ivy, as a perfectly hardy evergreen, to cling to walls.

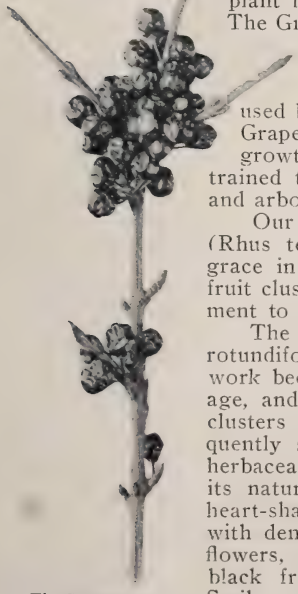
The climbing Honeysuckles all bear colored fruits in small clusters, notably the western Lonicera Sullivanti, which is particularly interesting from the way the dense clusters of dark scarlet berries are nestled into the peculiar, round, saucer-like, bluish-green leaves, and is effective from July to late fall.

The English Ivy (Hedera helix), where properly planted in cool, shady, sheltered locations, occasionally, though rarely in this vicinity, it is true, bears those clusters of berries that are usually black, though in England at least, red, yellow, and white colored varieties occur.

The Bitter Sweets, however, require no special adaptation of locality or soil, but under all conditions are most attractive in their fruitage, so conspicuously so that they, like the Snowberry, have been planted for many years back principally for their berry effects. The Climbing Bitter Sweet (Celastrus scandens), otherwise locally known as the Roxbury Waxwork, is gorgeous from late summer to April in its abundant show of orange berries, borne in long clusters on every branch and twig, and rendered doubly attractive by their contrast with the dark foliage, in summer, and later with the lemon yellow cups which draw back with frost to expose the richer colored berries. Especially beautiful is this plant when used as a lawn shrub and allowed to form a perfect tangle of branches. It will tie itself up into the most fantastic knots, yet form a shrub of rounded outline as broad as you may please, with graceful arching stems hanging out from the mass in an en-

deavor to find support. Imagine this tangle of purple-gray branches aglow with the multitude of orange berries all winter, and you can easily understand how the effect is intensified by contrast with the winter's snow. Other interesting forms from Japan are Celastrus articulatus or orbiculatus and C. punctatus, both of which bear their equally showy berries in small clusters close to the stems, and in even greater profusion than our own, but hidden by the foliage until fall, when in a night the plant is transformed from a green-leaved climbing vine to a gorgeous panoply of color.

The Virginia Creeper (Ampelopsis quinquifolia or Parthenocissus quinquifolia) bears attractive, open clusters of red-stemmed blue berries in late summer, falling soon after the gorgeous autumn colored foliage that this vine assumes; but the Boston Ivy (Ampelopsis tricuspidata) hides its equally large clusters of blue-black fruits under the leaves, remaining on the branches, however, until midwinter. Another and very distinct Japanese vine is the Ampelopsis or Vitis heterophylla of rampant growth, with thin, heart-shaped toothed or lobed leaves of light green, and bearing long, grapelike, showy clusters of berries, white tinged with blue, and lasting on the vine all winter; a most admirable plant for covering ledges, walls or trellises. The Grape Vines are familiar enough, yet too seldom used for the ornamental effect of their fruit. A notably free-bearing variety that I have used because of this value, was the Clinton Grape, which is extremely rampant in growth and prolific in its fruitage, and when trained to the pillars and beams of pergolas and arbors gives a pleasing effect.



The Dahurian Buckthorn

Our pestiferous Poison Ivy or Poison Oak (Rhus toxicodendron), has a certain saving grace in the winter effect of its pearly gray fruit clusters, not, however, a sufficient atonement to prevent its sacrifice.

The Bull Briar of our Swamps (Smilax rotundifolia) has been frequently used in park work because of its showy, glossy green foliage, and secondarily for its summer and fall clusters of blue fruit. Another native frequently seen along our roadsides, is Smilax herbacea, the Carion Vine, a perennial herb in its nature, sending up green barked, broad, heart-shaped, glossy light green leaved stalks, with dense, rounded heads of greenish white flowers, followed by clusters of rich blue-black fruits; but best of all of the hardy Smilax is the southern Smilax Walterii with oval, showy green foliage, and

bearing smaller clusters of coral red fruits. This is rarely used, but is nevertheless a practical vine for varied purposes.

Of creeping evergreens there is a small list of interesting berried subjects varying widely in their relationship, however. The Ground Hemlock, our only true native Yew (Taxus Canadensis), occasionally bears a crop of scattered, deep pink, black-seeded, berries that are handsome to look upon but bad to eat. An excellent plant for shady undergrowth purposes.

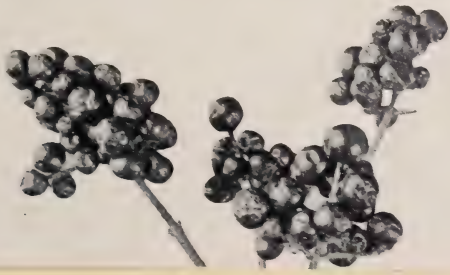
The Ground Savin (Juniperus prostrata), is often full of steel blue berries throughout the winter. An equally excellent plant with the last, for the opposite use in sterile, dry, sunny banks. Our Checkerberry or Wintergreen (Gaultheria procumbens), is beautiful in its showy scarlet to crimson twin berries, partially hidden under the bright, glossy green foliage that takes on such pleasing shades of coppery hue during the winter months. This, and its western purple-fruited cousin (Gaultheria Shallon), are eagerly sought for and used in Europe, but sorely neglected here in America. Where our native occurs naturally it should be severely let alone to increase as it may, for it is not easily transplanted; yet if you want to plant them, insist that they be sent you in sods, otherwise you will certainly gain nothing for your pains; further, plant them in a shady, cool, moist situation, with Rhododendrons or other leaf-mould loving plants, for best results.

The Partridge Berry (Mitchella repens), is of greater fastidiousness for coolness, shade, and moisture than the last. The appeal to our impressions of berry beauty was probably first engendered by this plant from the beautiful contrast of its coral red fruits with its creeping, glossy green evergreen leaved stems throughout late summer and winter; and doubly appetizing to our youthful days in their spicy flavor. If you have never appreciated the delicious perfume and delicate coloring of its small twin flowers in May, do not fail of the next opportunity to do so.

Another showy fruited evergreen native creeper is our Mountain Cranberry or Bear-berry (Arctostaphylos uva-ursi), found occasionally on gravelly banks or among ledges, making a perfect mat of evergreen, narrow dark green foliage, assuming pleasing red or coppery autumn and winter shades with solitary set though numerous small white flushed pink flowers, followed by round scarlet berries which cling to the stems throughout the winter. Plant carefully in well-drained, moist crevices, and faithfully attend to it for the first season, and in this you will have a treasure. Still another choice creeping evergreen is the Crowberry (Empetrum nigrum), which grows so abundantly on the ledges of our Maine seacoast, particularly in the region of Mount Desert Island, forming a low, fine-leaved mat of growth with shining black berries in fall and winter. A scarce plant to purchase and troublesome to establish yet interesting. The Winterberry (Vaccinium Vitis Idaea), seen so abundantly on the higher mountain tops of New

England, forms a dense, tufted, darkest green, oval, leathery foliaged shrub, with pink-white flowers and deep crimson red berries; this, too, can be grown in cool nooks of ledges or rockwork, provided it is not subjected to shade or serious drip.

Perhaps you will feel that I have added the "last straw" when I speak of the ornamental value of the Cranberries of our bogs, (Vaccinium or Oxycoccus macrocarpa) nevertheless, they are showy, and it is no crime for you to naturalize them in a cool, moist situation at the base of a ledge bordering a brook, or as a substitute for grass in moist gutters along meadow avenues. They may not appeal particularly to your



Common Privet

friends, but as you know them better you will learn they have much to recommend themselves to you in beauty. Our own native New England form is good enough, but if you wish variety, the European (V. oxycoccus), or that southern mountain-top species (V. erythrocarpus), can be used effectively.

We have fairly well exhausted the subject, so far as it applies to woody plants, though I have omitted many half-hardy southern and foreign kinds with showy berries. The descriptions of herbs will be limited in view of the less important value of the class for their fruit effect. The Baneberries bear very large and showy spikes of berries held well above the foliage, and remain showy from July to October; the Red Baneberry (Actea rubra), with glistening crimson berries, and the White Baneberry (A. alba), with pure white berries on pink stems. Splendidly adapted to moist, shady locations.

The Jack in the Pulpit (Arisæma triphylla), follows its odd shaped flowers with a cluster of showy scarlet fruits remaining on the plant until frost. This grows equally as well in the comparatively dry herbaceous border as in the swamp, particularly if given a slightly shady location. It will repay you to become familiar with all its phases by having it growing close at hand. "Jack" has a cousin, seldom seen, that thrives at the edge of shallow ponds or in moist spring spots, the Marsh Calla (Calla palustris), a miniature creeping prototype of our greenhouse Calla Lily, with white green-tipped flowers followed in mid-summer by clusters of red berries.

Have you ever seen those scarlet berries that the Lily of the Valley (Convallaria majalis), produces in summer, and would it not be a double advantage to give this plant more care and fertilizer than you do, perhaps, that by encouraging the growth to perfect the berries, you may gain added promise of greater gain in bloom another year?

The native Strawberries (Fragaria Canadensis), are showy in flower and fruit, but hardly worth cultivating as compared with the garden kinds, yet there is a pretty creeping strawberry from the Himalayas (Fragaria Indica), the Indian Strawberry, that will clamber over stone banks, bloom freely, and bear showy crimson fruits in profusion, and by reason of the dry character of the fruits they will be left alone, and their ornamental effect enjoyed.

One of the Paeonias (Paeonia corallina), bears large brown, velvety seed-pods which open in mid-summer and expose bright, coral red berries lasting in effect until hard frost.

The Chinese Lantern plant (Physalis Franchetti), a hardy perennial as far north as New York, and here, with protection of leaves, if properly grown, amply repays the wait necessary to obtain the best results, for usually the plant requires two seasons to gain strength to show its best effect. When sufficiently established, it is gorgeous with its showy, deep orange-red, lantern-like fruits. The Alkegeni (P. alkegeni), a longer known plant, is beautiful, too, only in a less degree.

Our native Poke-weed (Phytolacca decandra), is extremely showy in summer and fall, forming a large arching branched, red stemmed plant four to five feet high, and broader than tall, the branches studded with spikes of greenish-white flowers followed by showy clusters of purple and black berries. This is too gross a feeder for the garden, but naturalized in waste places or on sterile banks, it will care for itself.

All the Solomon's Seals, of which there are several forms, bear interesting berries; the Giant Solomon's Seal (Polygonatum giganteum) of our gardens, and another garden form (P.

Ampelopsis Weterophylla

multiflorum), bear pendent blue-black berries below the graceful arching stems.

The May Apple of our Central and Southern States (Podophyllum peltatum), hides its yellow, egg shaped fruits under the showy, umbrella-like foliage of the plant, and a Himalayan species (P. Emodii), is particularly interesting from the large size and brilliant color of its orange-red edible fruits. These and the Solomon's Seals delight in rich, moist soils with partial shade, and under such conditions amply repay any effort in their behalf.

But to my mind one of the most beautiful berry-bearing herbs is the Wild Spikenard (Vagnera or Smilacina racemosa) a beautiful native in any of its growing stages. It springs from the ground with graceful arched stems clothed with oval, light green foliage, bearing in July showy spikes of creamy white flowers, which are quickly followed by clusters of bead-like berries changing from green to rich orange and scarlet shades, remaining effective until hard frost kills the stem to the ground. A delightful plant for the flower border or to naturalize.

The Blackberry Lily or Leopard Flower, variously known as Pardanthus or Belemcanda chinensis, has lost popularity, just as many other good things are forgotten in the mad rush for novelty, with merit frequently a secondary consideration. The beautifully-spotted flowers, though individually short lived, are borne in constant succession for weeks, and then are grad-

ually supplanted by brilliant, glossy berries in clusters almost an exact counterpart of a large blackberry, and remain in perfection until the following spring; they are frequently used with grasses for winter decoration. The popularity of this plant should return.

These are the more notable berry-bearing cultivated herbs; but if you are an enthusiast, and want to go further, then seek out the following natives, and either transplant them to the garden under favorable and similar conditions to their native homes, or, better still, encourage them in their homes by protecting them from the overgrowth of weedy neighbors: The blue and black berried subjects include the Clintonias in the deep, moist, shady woods; the Umbrella-leaf (Diphyllea cymosa); the blue Cohosh (Caulophyllum thalictroides); the Indian-wort (Aralia racemosa), Sarsarparillas Aralia nudicaulis, and A. hispida, and the Indian Cucumber-root (Medeola Virginica). On the other hand, the Deadly Nightshade (Solanum dulcimara), the Ginseng (Panax quinquifolia), and Twisted Stalks (Streptopus amplexicaulis and roseus), all bear showy crimson berries. The Trilliums or Wake Robins also bear various colored clusters of berries.

This comprises the principal hardy plants bearing showy berries or fruits. Some less important additions could be made, but for all practical purposes the list is more than enough.

The Bunch-berry in flower.

INDEX

Quotations given apply to plants of ordinary commercial grades varying in height or age according to the natural vigor of growth of each kind.

Those indicated in *italics* are synomymous with other names.

	Price each	Page
Actea (Baneberry)		
alba	$0.25	33
rubra	.25	33
Aralia (Sarsparilla)		
hispida	.25	36
nudicaulis	.25	36
racemosa	.25	36
Arctostaphylos (Bear-berry)		
uva-ursi	.50	32
Ampelopsis (Woodbine)		
quinquifolia	.25	31
tricuspidata	.35	31
Arisaema (Jack-in-Pulpit)		
triphylla	.25	33
Aronia (Chokeberry)		
nigra	.35	24
Balemcanda (Blackberry Lily)		
chinensis	.25	35
Benthamia		
fragifera	1.00	17
japonica	1.00	17
Benzoin (Spice Bush)		
odoriferum	.50	24
Berberis (Barberry)		
amurense	.50	12
aquifolia	.35	12
canadensis	.35	12
hakodate	.50	12
heteropoda	.50	12, 13
japonica	.75	12, 13
sieboldi	.50	13
thunbergii	.35	11
vulgaris	.35	11
Callicarpa (French Mulberry)		
americana	.35	24
japonica	.35	24
purpurea	.35	24
Calla (Calla)		
palustris	.25	33
Caulophyllum (Blue Cohosh)		
thalictroides	.25	36
Celastrus (Bitter Sweet)		
articulatus	.35	31
orbiculatus	.35	31
punctatus	.35	31
scandens	.35	30
Celtis (Nettle Tree)		
occidentalis	.50	11
Chionanthus (White Fringe)		
retusus	1.00	25
virginicus	.50	25
Convallaria (Lily of the Valley)		
majalis	.25	34
Coriaria		
japonica	1.00	25
terminalis	1.00	25
Cornus (Dogwood)		
alba	.35	16
alternifolia	.50	15
amomum	.35	15
Cornus (Dogwood)		
baileyii	.50	15
canadensis	.35	16
candidissima	.35	14, 16
circinata	.50	16
floridus	.75	15
glabrata	.50	16
kousa	1.00	17
mas	.35	17
nuttalli	1.00	16
officinalis	1.00	16
paniculata	.35	17
pubescens	.50	14
sanguinea	.35	16
sericea	.35	15
stolonifera	.50	15
stricta	.50	16
suecica	.50	16
Cotoneaster		
acuminata	.50	21
buxifolia	.50	21
frigida	.50	21
horizontalis	.50	21
microphylla	.50	21
multiflora	.50	21
nepalensis	.50	21
nummularia	.50	21
reflexa	.50	21
simonsi	.50	21
speciosa	.50	21
tomentosa	.50	21
vulgaris	.50	21
Crataegus (Thorn)		
arnoldiana	1.00	5
coccinea	.50	4
cordata	.50	5
crus-galli	.50	4
douglassi	.50	5
mollis	.50	4
monogyna	.35	5
oxycantha	.35	5
Daphne		
mezereon	.50	25
mezereon alba	.50	25
Diphyllea		
cymosa	.25	36
Eleagnus (Oleaster)		
angustifolia	.50	26
argentea	.50	26
edulis	.50	26
longipes	.50	26
multiflora	.50	26
parviflora	.50	26
pungens	.50	26
umbellata	.50	26
Empetrum (Crow-berry)		
nigrum	.50	32
Euonymus (Spindle Tree)		
alatus	.75	7
atropurpureus	.50	7
bungeanus	.75	6

	Price each	Page
Euonymus (Spindle Tree)		
europaeus	.50	6
europaeus fructo alba	.75	6
hamiltonianus	1.00	7
latifolius	.75	6
nanus	.35	7
obovatus	.35	7
fruiting form	.50	7
radicans	.35	7, 30
sieboldi	.75	7
verrucosus	1.00	7
yeddoensis	1.00	7
Fragaria (Strawberry)		
canadensis	.25	34
indica	.25	34
Gaultheria (Checkerberry)		
procumbens	.35	32
shallon	.75	32
Hedera (Ivy)		
helix	.35	30
Hippophae (Sea Buckthorn)		
rhamnoides	.35	25
Ilex (Holly)		
cassine	1.00	22
crenata	1.50	22
glabra	.75	22
laevigata	.50	21
monticola	.75	22
opaca	1.00	11, 21
verticillata	.35	21
Illicium (Mt. Holly)		
illicoides	.50	23
Iris (Gladwin)		
foetidissima	.25	34
Juniperus (Savin)		
prostrata	.50	32
virginiana	.50	11
Lepargyrea (Silver-berry)		
argentea	.50	26
Ligustrum (Privet)		
amurense	.35	29
ciliatum	.35	29
meadia	.35	29
ovalifolium	.35	29
regelianum	.35	29
vulgare	.35	29
Lonicera (Honeysuckle)		
alpigena	.50	
bella albida	.35	14
bella candida	.35	14
chrysantha	.50	14
ciliata	.50	14
coerulea	.50	14
gracilipes	.50	14
involucrata	.35	14
ledebouri	.35	14
morrowii	.35	14
yellow-fruited form	.50	14
phylomelae	.50	14
ruprechtiana	.35	14
standishi	.35	14
sullivantii	.50	30
tatarica	.35	14
Lycium (Matrimony Vine)		
barbarum		30
chinensis		30
halamifolium		30
Magnolia		
acuminata	.75	6
frazerii	1.00	6

	Price each	Page
Magnolia		
glauca	1.00	6
hypoleuca	1.00	6
kobus	1.00	6
macrophylla	1.50	6
tripetala	.75	6
Mahonia (Ashberry)		
aquifolia	.35	12
Medeola		
virginica	.25	36
Mitchella (Partridge-Berry)		
repens	.25	32
Morus (Mulberry)		
alba	.50	11
nigra	.50	11
Myrica (Bay-berry)		
cerifera	.35	23
Nemopanthes (Mt. Holly)		
canadensis	.50	23
fascicularis	.50	23
Oxycoccus (Cranberry)		
macrocarpa	.25	33
Paeonia (Paeony)		
corallina	.50	34
Panax		
quinquifolia	.25	36
sessiliflorum	.75	23
Pardanthus (Blackberry Lily)		
chinensis	.25	35
Parthenocissus (Woodbine)		
quinquifolia	.25	31
Phellodendron (Cork Tree)		
amurensis	1.00	11
Photinia		
villosa	.50	24
Physalis (Lantern Plant)		
alkegeni	.25	34
franchetti	.25	34
Phytolacca (Poke-weed)		
decandra	.25	34
Podophyllum		
peltatum	.25	35
Polygonatum (Solomon's Seal)		
giganteum	.25	35
multiflorum	.25	35
Prunus		
alleghensis	.50	11
angustifolia	.50	11
besseyi	.50	10
chamaecerasus	.75	10
hortensis	.50	11
maritima	.50	10
morello	.50	19
padus	.50	10
pennsylvanica	.50	10
pumilla	.50	9, 10
semperflorens	1.00	10
utahensis	.50	10
virginiana	.50	9
Pyrus (Apple)		
baccata	.50	8
floribunda	.75	7
sieboldii	.50	9
spectabilis	.50	8
toringo	.50	7
Rhamnus (Buckthorn)		
caroliniana	.35	29
catharticus	.25	29
dahurica	.50	29

	Price each	Page
Rhammus (Buckthorn)		
frangula	.50	29
purshiana	.35	29
Rhus (Sumac)		
toxicodendron		31
typhina	.35	11
Ribes (Currant)		
alpinum	.50	27
fasciculatum	.50	27
rubrum	.25	27
Rosa (Rose)		
alpina	.50	14
lucida	.35	13
multiflora	.35	14
rubiginosa	.35	14
rugosa	.50	13
rugosa alba	.50	13
Rubus (Raspberry)		
chamaemorus	.50	28
odoratus	.35	28
phaenocolassus	.35	28
spectabilis	.50	28
Sambucus (Elder)		
canadensis	.35	28
racemosa	.50	28
Sassafras (Sassafras)		
officinale	.75	11
Shepherdia (Silver Berry)		
argentea	.50	26
Smilax		
herbacea	.35	31
rotundifolia	.35	31
walterii	.50	31
Smilacina (Spikenard)		
racemosa	.25	35
Solanum		
dulcimara		36
Sorbus (Mt. Ash)		
araia	1.00	4
americana	.75	4
arbutifolia	.35	24
aucuparia	.50	3
hybrida	.75	4
Sorbus (Mt. Ash)		
melanocarpa	.35	24
tianschaianica	1.00	4
Streptopus		
amplexicaulis		36
roseus		36
Symphoricarpus (Snowberry)		
racemosus	.35	27
occidentalis	.35	27
vulgaris	.35	27
Symplocus (Sweet-leaf)		
crataegioides	1.50	22
Taxus (Yew)		
canadensis	.75	32
Trillium (Wake Robin)	.25	36
Vaccinium (Cranberry)		
erythrocarpum	.35	33
macrocarpum	.25	33
oxycoccus	.25	33
vitis-idea	.50	32
Vagnera		
racemosa	.25	35
Viburnum		
acerifolium	.50	20
alnifolium	1.00	18
cassinoides	.75	18
dentatum	.35	18
dilitatum	1.00	20, 21
lantana	.35	20
lantanoides	1.00	18
lentago	.50	18
molle	.50	18
opulis	.35	19
pekinensis	.75	19
prunifolium	.75	18, 21
pubescens	1.00	19, 21
sargentii	.75	19
sieboldii	.75	20, 21
tomentosum	.75	20
wrightii	1.00	20, 21
Vitis (Grape)		
heterophylla	.35	31
hybrida v. clinton	.35	31

ACCORDING TO SEASON.

JANUARY.

Ampelopsis heterophylla, A. tricuspidata, Arctophylos uva-ursi, Berberis amurensis, B. sinensis, B. heterophylla, B. canadensis, B. thunbergii, B. vulgaris, Celastrus scandens, C. orbiculatus, C. punctatus, Celtis occidentalis, Cornus circinata, C. candidissima, Cotoneaster acuminata, C. tomentosa, C. nummularia, C. buxifolia, Crataegus coccinea, C. crus-galli, C. cordata, Euonymus alatus, E. obovatus, E. europaeus E. latifolius, E. atropurpurea, E. bungeanus, E. radicans, Gaultheria procumbens, Hedera helix, Hippophae rhamnoides, Ilex laevigata, I opaca, I. verticillata, Ligustrum in all varieties. Mitchella repens, Myrica cerifera, Panax sessiflorum, Photinia villosa, Pyracantha coccinea, Pyrus toringo, P. floribunda, Rhamnus cathartica, R. dahurica, Rhodotypus kerrioides, Rhus toxicodendron, R. typhina, R. glabra, Ribes fasciculatum, Rosa lucida, R. multiflora, R. rubiginosa, and other varieties. Sorbus americana, S. aucuparia, S. melanocarpa, S. Arbutifolia, Symphoricarpus in all kinds, Viburnums in all varieties, Vitis heterophylla.

FEBRUARY.

Ampelopsis tricuspidata, Berberis thunbergii, B. canadensis, B. vulgaris, B. amurensis, Celastrus in variety. Celtis occidentalis, Cotoneaster microphylla, C. nummularia, Crataegus cordata, Euonymus bungeana, E. radicans, Gaultheria procumbens, Hippophae rhamnoides, Ilex opaca, I. verticillata, Ligustrum in variety. Myrica cerifera, Photinia villosa, Pyracantha coccinea, Rhamnus catharticus, Rhus typhina, R. glabra, Rosa lucida, R. multiflora, Sorbus aucuparia Symphoricarpus racemosus, S. vulgaris, Viburnum dilatatum, V. sargentii, V. opulis, V. wrighti, Vitis heterophylla.

MARCH.

Arctostaphylos uva-ursi, Berberis amurensis, B. canadensis, B. thunbergii, B. vulgaris, Celastrus in variety. Celtis occidentalis, Crataegus cordata, Euonymus bungeana, E. radicans, Hippophae rhaminoides, Ilex opaca, Ligustrum in variety. Myrica cerifera, Rhamnus catharticus, Rhodotypus kerriodes, Rhus glabra, R. typhina, Rosa lucida, R. multiflora, Symphoricarpus vulgaris.

APRIL.

Berberis vulgaris, B. canadensis, Arctostaphylos uva-ursi, Celtis occidentalis, Ligustrum in variety, Rhamnus catharticus, Rhodotypus kerriodes, Rhus typhina, R. glabra, Rosa lucida, R. multiflora, Symphoricarpus vulgaris.

MAY.

Gaultheria procumbens, Mitchella repens, Myrica cerifera.

JUNE.

Daphne mezereon, Arisaema triphylla, Gaultheria procumbens, Mitchela repens, Photinia, Podophyllum peltatum, P. emodi, Polygonatum giganteum, Berberis aquifolia, B. repens.

JULY.

Actea spicata, Amelanchier in variety, Arisaema, Blueberries (Vaccineum), Honeysuckles in great variety, Lycium in variety, Morus in variety, Phytolacca decandra, Prunus pumilla, P. virginiana, P. padus, Cornus canadensis, C. suecica, Rubus odoratus, R. phaenocolasus, Smilax herbacea, Clintonia borealis, Trilliums in variety, Diphylleia, Caulophyllum, Fragaria.

AUGUST.

Benzoin odoriferum, Callicarpa in variety, Chionanthus in variety, Coriaria in variety, Cornus alternifolia, C. candidissima, C. mas, Eleagnus in variety, Fragaria, Gaultheria, Iris foetidissima, Lonicera in all varieties, Lycium in variety. Magnolias in variety, Mitchella repens, Morus in variety, Paeonia corallina, Phytolacca, Polygonatum, Prunus in all varieties, Rhamnus in all varities, Ribes in all varieties, Rubus in all varieties, Shepherdia in variety, Symplocus crataegioides, Viburnum in variety, Xanthoxylum, Belemcanda, Streptopus, Clintonia, Parthenocissus, Vaccineum.

SEPTEMBER.

Actea, Aralia, Arctostaphylos, Berberis in variety, Callicarpa, Celastrus scandens, Chionanthus, Coriraria, Cornus, Cotoneaster, Crataegus, Euonymus, Ilex, Ligustrum, Lonicera, Magnolia, Lycium, Pyrus, Rhamnus, Rhus, Ribes, Rosa, Sambucus, Sorbus, Symphoricarpus, Viburnum all in their great variety. Arctostaphylos uva-ursi, Arisaema triphylla, Asparagus officinalis, Callicarpas in variety. Celastrus in variety, Convallaria, Gaultheria procumbens, Hippophae rhamnoides, Ilex in variety, Iris fœtidissima, Juniperus in variety, Illicium illicoides, Panax sessilflorum,'Phellododendron amurensis, Photinia villosa, Physalis in variety, Pyracantha coccinea, Rhodotypus kerroides Smilacina racemosa, Symplocus crataegioides, Vaccineum in variety, Vitis heterophylla.

OCTOBER.

Aralia, Berberis, Callicarpa, Celastrus, Celtis, Cornus, Cotoneaster, Crataegus, Euonymus, Ilex, Juniperus, Ligustrum, Lonicera, Lycium, Magnolia, Pyrus, Rhamnus, Rhus, Rosa, Sambucus, Sorbus, Symphoricarpus, Viburnum, all in their many varieties. Arctostaphylos, Asparagus, Empetrum, Gaultheria, Hippophae, Mitchella, Illicium, Panax, Phellododendron, Photinia, Pyracantha, Rhodotypus, Smilacina, Symplocus, each in their single species as described. Parthenocissus or Ampelopsis quinquifolia. Iris foetidissima, Physalis franchetti, P. alkegini, Ribes fasciculatum, Vitis-heterophy, Belemcanda chinensis, Smilax walteri.

NOVEMBER.

Ampelopsis, Aralia, Berberis, Callicarpa, Celastrus, Cornus, Cotoneaster, Crataegus, Euonymus, Ilex, Juniperus, Ligustrum, Lonicera, Lycium, Pyrus, Rhamnus, Rhus, Rosa, Sambucus, Sorbus, Symphoricarpus, Viburnum in all their species. Actea, Arctostaphylos, Celtis, Empetrum, Gaultheria, Hippophae, Mitchella, Myrica, Nyssa, Panax, Phelledodendron, Photinia, Pyracantha, Rhodotypus, Smilacina and Vitis in their species as described. Iris foetidissima, Belemcanda chinensis, Physalis franchetti, Ribes fasciculatum.

DECEMBER.

All species of Berberis, Callicarpa, Celastrus, Celtis, Cotoneaster, Crataegus, Euonymus, Ilex, Juniperus, Ligustrum, Lycium, Rhamnus, Rhus, Rosa, Symphoricarpus, Viburnum. Aralia spinosa, A. chinensis, Arctostaphylos uva-ursi, Cornus alba, C. amomum, C. candidissma, C. circinata, C. florida, C. sanguinea, C. stolonifera, Gaultheria procumbens, Hippophae rhaminoides, Lonicera morrowii, L. ruprechtiana, L. sullivanti, Mitchella repens, Myrica cerifera, Nyssa sylvatica, Pyracantha coccinea, Pyrus torringo, P. floribunda, P. baccata, Rhodotypus kerrioides, Ribes fasciculatum, Taxus canadensis, Vitis heterophylla.

Above list will be subject to certain modifications, though it is in the main correct. Such additions or changes as may be necessary, will be embodied in the next edition of this monograph.

THE READING NURSERIES

THE Reading Nurseries have been established fifty-one years. During this period nearly every known hardy tree, shrub, fruit or flower has been given a full test, as to its adaptability to New England climatic or soil conditions.

In succeeding the late Jacob W. Manning in the ownership of these nurseries, it will be my endeavor to maintain the most unique collection of ornamental plants in New England, not in wholesale quantities of any one kind, for I do not wish to place myself in the position of being forced to dispose of a surplus, but that customers may find here the choicest plants, from the standpoint of rarity or unusually well-developed specimens in size, with which to create unusual and immediate effects.

No attempt will be made to raise cheap material, for such can be purchased and supplied from other sources to far greater pecuniary advantage to myself than for me to attempt to cover a large nursery area with such stock, which generally brings less return than the expense of raising. On the other hand, while my rates may appear high for that better class of plants that I shall grow under my own supervision, actually such material is by far the most economical in its quicker results.

Advantage will be taken of the wide experience I have had in landscape gardening undertakings of the past to create of the nursery a place of interest, laid out with a view of showing the best features of plants at all seasons, and their proper grouping and arrangement; and it is expected that this feature will be of the greatest value to customers in the selection of their needs.

Visitors are welcome at all times.

J. WOODWARD MANNING.